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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,019	12/31/2001	Xiaowei Weng	56.0622	7528

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EXAMINER

THOMPSON, KENNETH L

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,019

Applicant(s)

WENG ET AL.

Examiner

Kenn Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-15 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ball sealers, gel packer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinhardt et al., U.S. 5,425,424.

Regarding claims 1 10, 11 and 15, Reinhardt et al. discloses in figures 1-15 a method for treating a subterranean formation (12) having an uncased borehole (12 below 10) formed therein. Reinhardt et al. discloses providing a well treatment tool having (A) at least first and second burst disk assemblies (20), an annulus interval isolation mechanism (seal above slip 14 between 10 and A), a conduit (22) therein, passing the tool (36,40,38) into the borehole and positioning the tool in a suitable location for treating the formation; pumping a treatment fluid (fig 5) under pressure through the conduit, the treatment fluid then contacting and rupturing the first burst disk assembly (fig 4, lowermost 20) the treatment fluid then passing into an isolated annulus interval and treating the formation.

As to claim 2, Reinhardt et al. discloses each burst disk assembly (20) comprises a membrane (62) and a perforated disk (70).

As to claim 3, Reinhardt et al. discloses providing a mechanism (40) for blocking fluid flow through the perforated disk (20 above 40).

As to claims 4 and 13, as best understood by the Examiner, Reinhardt et al. discloses use of ball sealers.

As to claim 5, Reinhardt et al. discloses wherein the well fracturing tool provides a single fluid conduit (36).

As to claim 9, Reinhardt et al. discloses a sand plug formation tool (40).

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As to claim 12, Reinhardt et al. discloses a diversion mechanism (40) for selectively preventing fluid flow through the burst disk assemblies (20).

As to claim 14, Reinhardt et al. discloses the diversion mechanism includes a proppant plug (40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reinhardt et al., U.S. 5,425,424 in view of Sask et al., U.S. 4,995,462.

As to claim 7, Reinhardt et al. discloses the annulus interval isolation mechanism is a packer (40). Reinhardt et al. does not disclose the packer is a cup packer. Sask et al. teaches use of a cup packer (38) since it requires only an initial compression to assume a sealing state (col. 2, lines 27-37). It would have been obvious to one having ordinary skill in the art at the time of the invention to arrange for the packer disclosed by Reinhardt et al. to be a cup packer, as taught by Sask et al. since it requires only an initial compression to assume a sealing state without requiring continued or periodic actuation.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reinhardt et al., U.S. 5,425,424 in view of Odorisio, U.S. 5,308,132.

As to claim 7, Reinhardt et al. discloses the annulus interval isolation mechanism is a packer (40). Reinhardt et al. does not disclose the packer is an annulus gel packing. Odorisio teaches use an annulus gel packing (74) to provide a temporary means of preventing contaminants from affecting other elements of the tool (col. 5, lines 3-20). It would have been obvious to one having ordinary skill in the art at the time of the invention to arrange for the packer disclosed by Reinhardt et al. to be an annulus gel packing, as taught by Odorisio to provide a temporary means of preventing contaminants from affecting other elements of the tool, means selectively placeable and not required to be run in with the tool.

Allowable Subject Matter

Claims 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest all the claimed subject matter including the first burst disk assembly having a lower bursting pressure than the second burst disk assembly.

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

22 February 2005



Kenneth Thompson
Primary Patent Examiner
Group 3672